Department of Energy

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Dear Gentlemen:

Enclosed is the Rocky Flats Cleanup Agreement Implementation Quarterly Status Report for the Third Quarter for Fiscal Year 2004.

If you have any questions or comments, please contact me at (303) 966-2282 or Richard Schassburger at (303) 966-4888.

Sincerely,

Richard J. Schassburger
RFCA Coordinator

Enclosure

cc w/Encl.:
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QUARTERLY STATUS REPORT

ROCKY FLATS CLEANUP AGREEMENT IMPLEMENTATION

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

THIRD QUARTER FISCAL YEAR 2004

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1.0 Introduction

Pursuant to paragraphs 122 and 263 of the Rocky Flats Cleanup Agreement (RFCA or Agreement), this quarterly status report presents the progress toward implementation of activities covered under the Agreement. The RFCA is a legally binding agreement between the Department of Energy (DOE), the Environmental Protection Agency (EPA), and the Colorado Department of Public Health and Environment (CDPHE) to accomplish required cleanup of radionuclide and hazardous substance contamination at and from the Rocky Flats Environmental Technology Site (RFETS). For the purposes of this report, the term, the Site, refers to both DOE and the Kaiser-Hill Company, L.L.C. (Kaiser-Hill).

This report describes activities that occurred from April 2004 through June 2004 (referred to as the third quarter of fiscal year [FY] 04). The sections of this report are organized into the following topics: (1) Introduction; (2) Site-wide Activities Implementing RFCA and Supporting RFETS Closure; (3) RFETS Closure Projects; (4) Water Management; and (5) List of Approved Decision Documents.

2.0 Site-wide Activities Implementing RFCA and Supporting RFETS Closure

2.1 Integrated Monitoring Plan Update

No changes to the Integrated Monitoring Plan (IMP) were issued during the third quarter of FY04. Changes to monitoring plans for all media were introduced during the third quarter of FY04 with a focus on how the monitoring networks will be configured at physical completion. The RFCA Project Coordinators have targeted this summer as the preferred deadline for defining tentative monitoring configurations at physical completion. In response, the IMP technical leads have targeted this fall as the preferred deadline for publishing "end state" monitoring plans.

3.0 RFETS Closure Projects

RFETS Closure activities conducted during the third quarter of FY04 included: (1) Industrial Area Operable Unit, Building (B) 771; (2) Industrial Area Operable Unit, B776/777; (3) Industrial Area Operable Unit, B371/374; (4) Industrial Area Operable Unit, B707; and (5) Remediation, Industrial & Site Services Project (RISS).

3.1 Industrial Area Operable Unit, B771 Closure Project

The B771 Closure Project Decommissioning Operations Plan (DOP) was approved by CDPHE on January 11, 1999. As of June 30, 2004, seven modifications to the DOP have been approved. During the third quarter of FY04, the B771 Closure Project Team conducted the following activities:

1. Completed demolition of area AB (Annex), AM (B774) and trailers T-771 A, B, and C.

2. Completed demolition of area AG (771 stack) using explosives.
3. Completed the removal of the infinity room (walls, ceilings and floor).
4. Completed all hydrolasing activities. Additional "hot spot" decontamination activities will occur using "dry" decontamination techniques.
5. Submitted and received CDPHE approval, via contact record dated May 12, 2004, on DOP Field Modification #7. The modification provides clarification for the removal of the infinity room and the stack demolition.

Activities planned for the fourth quarter of FY04 include demolishing B771, including site restoration.

3.2 Industrial Area Operable Unit, B776/777 Closure Project

The B776/777 Closure Project DOP was approved by CDPHE on November 5, 1999. As of March 31, 2004, ten minor modifications and one major modification to the DOP have been approved. The Demolition Plan was a major modification; it was approved on July 1, 2003. During the third quarter of FY04, the B776/777 Closure Project Team conducted the following activities:

1. Completed decontamination of the B776/777 main plenum (PL-250).
2. Completed decontamination, final surveys and encapsulation in Areas I & II (north and east portions of B777).
3. Completed decontamination and final surveys in Area III (central portion of B777).
4. Completed ~ 40% of the decontamination activities in Area V (central portion of B776).
5. Completed asbestos abatement of the exterior transite panels.
6. Completed the Zone 2 HVAC and overhead utility set (Set 83).
7. Completed packaging B730 pit sludge for shipment to Envirocare.

There are a total of 84 work sets in the B776/777 Project; 80 sets have been completed to date.

Activities planned for the fourth quarter of FY04 include:

1. Prepare minor modification to B776/777 DOP to re-type B701 from a type 1 to a type 2 facility. Building 701 will be decontaminated and the pre-demolition survey report (PDSR) will be completed during the fourth quarter.
2. Complete remaining asbestos abatement in B776/777.
3. Complete decontamination of the Size Reduction Vault, Areas IV, V, and VI.
4. Perform final surveys in Areas IV and V.
5. Encapsulate area V.

3.3 Industrial Area Operable Unit, B371/374 Closure Project

The B371/374 Closure Project DOP was approved by CDPHE on March 29, 2001. As of June 30, 2004, four field modifications to the DOP have been approved. During the third quarter of FY04, the B371/374 Closure Project Team conducted the following activities:

1. Continued dismantlement activities in the B371 canyons. To date 10 of 12 of the highly contaminated rooms have been dismantled and stabilized. Two of the canyons have been decontaminated to unrestricted release criteria. Dry decontamination activities are underway in two more canyons. Under modification four to the DOP, the ground floor structure and canyons must be decontaminated to unrestricted release criteria prior to demolition.
2. Completed five sets (12, 18, 23, 46, and 51). Set 12 included 62 tanks, 47 gloveboxes and an incinerator scrubber canyon in the B371 sub-basement.
3. Submitted and received approval of modification four to revision one of the B371/374 DOP.

There are a total of 45 dismantlement work sets in the B371/374 Project; 32 sets have been completed to date. The B371/374 Closure Project Team has removed 375 of 428 gloveboxes and 300 of 375 tanks.

Activities planned for the fourth quarter of FY04 include the continued strip-out of the 13 remaining sets and expansion of dry decontamination and trades dismantlement activities. The project anticipates declaring B371 criticality incredible and B374 operationally clean in the fourth quarter of FY04.

3.4 Industrial Area Operable Unit, B707 Closure Project

The B707 Closure Project DOP was approved by CDPHE on January 18, 2001. As of March 31, 2004, two minor modifications to the DOP have been approved. Activities conducted during the third quarter of FY04 include the completion of the following sets:

1. Set R-2: Stripout of electrical and mechanical systems above 8 feet in the CA rooms and corridors;
2. Set Y-3: B731 and B732 stripout;
3. Set Y-5: B778 maintenance shop electrical and mechanical stripout;
4. Set U-7: B707 safety systems removal, including criticality detection system, fire detection system, fire suppression system, and LS/DW system;
5. Second Floor, Sets 7, 14 and 15: Plenums 102 and 104 removal, and dry air systems 7, 11, and 12.

There are a total of ninety-nine work sets in the B707 Project; 81 sets have been completed as of June 30, 2004. To date, 376 of the total 377 glovebox/chainveyor equivalents have been removed from B707. The only remaining glovebox/chainveyor equivalent is Set K-4 (X-Y Retriever). Module walls have been removed in Module A and Modules C-H, and final surveys are underway in Modules F, G, and H.

Activities planned for the fourth quarter of FY04 include the completion of Sets K-4, T-3, Y-6 and Second Floor Sets 9, 10, 18 and 20. Continuing activities include asbestos abatement in B707 with module B wall and fitting removal and concrete shaving for radiological decontamination.

3.5 Remediation, Industrial & Site Services Project

RISS activities supporting RFETS closure during the third quarter of FY04 include decontamination and decommissioning (D&D) as well as environmental restoration (ER).

3.5.1 Decontamination and Decommissioning

During the third quarter of FY04, RISS conducted the following activities:

1. Demolished thirty-four facilities/structural items including B991, B223, B443, B881F, B881H, B890, B130, T124A, T303D, and the 903 Pad South Tent.
2. Removed and shipped off site the nitrogen tanks.
3. Continued the B444 complex decommissioning. The asbestos abatement in B447 and B448 has been completed. The major furnaces have been removed from B444. Asbestos abatement was completed in B443 and the building and all above ground tanks have been demolished.
4. Continued the B881 complex decommissioning. Building 881 decommissioning is 90% complete; demolition is scheduled for July 17, 2004. Demolition of B881F plenum, B881G EGEN, and B890 was completed. Demolition and backfill of the Exclusion Dock was completed. The north supply appurtenance and south dock landing area were demolished. Asbestos removal in underway in B883 and the Annex Building exterior asbestos containing material removal has been completed.
5. Completed glovebox removal in B559. "Potential" TRU waste removal included Dry Air system components and house vacuum system "hot spots"; Zone 1 and Zone 1A (Gloveboxes / Hoods) filter removal initiated.
6. Removed 77% of the steam lines (15,468 ft of 20,150 ft).
7. Accelerated demolition of New Process Waste Lines valve vaults (8 of 20).
8. Completed 40 shipments (352,000 gallons of estimated 700,000 total gallons) as part of the Aqueous Waste Treatment System.

Table 1 lists the status of RISS D&D Documents from April 1, 2004 through June 30, 2004

Table 1. Status of RISS D&D Documents

Building	Document	Submitted	Approved
881	PDSR	6-22-04	6-28-04
881	Facility Disposition RFCA Standard Operating Protocol (RSOP)	4-1-04	5-6-04
881F	PDSR	6-7-04	6-25-04
881F	RSOP	4-1-04	4-13-04
887	PDSR	6-17-04	6-30-04
887	RSOP	4-1-04	5-6-04
964	Component Removal (CR) RSOP	4-15-04	5-17-04
TYPE 1			
B130	Closeout Reports Submitted	4-14-04	
Tank 207	Closeout Reports Submitted	4-1-04	
B302	Closeout Reports Submitted	4-22-04	
428TB	Closeout Reports Submitted	6-28-04	
566B	Closeout Reports Submitted	4-12-04	
904TA	Closeout Reports Submitted	6-23-04	
B119	Closeout Reports Submitted	6-26-04	
119B	Closeout Reports Submitted	6-26-04	
T371A	Closeout Reports Submitted	4-5-04	
T371C	Closeout Reports Submitted	4-5-04	
T371D	Closeout Reports Submitted	4-5-04	
T371E	Closeout Reports Submitted	4-5-04	
T371F	Closeout Reports Submitted	4-5-04	
TYPE 2			
566	Closeout Reports Submitted	3-22-04	4-06-04
668	Closeout Reports Submitted	4-15-04	6-9-04

3.5.2 Environmental Restoration

ER activities implementing RFCA and supporting closure during the third quarter of FY04 included: (1) Buffer Zone (BZ) Operable Unit (OU), Group 900-11 (903 Pad and Inner Lip Area); (2) Industrial Area (IA) OU Group Individual Hazardous Substance Site (IHSS) Group 500-2; (3) IA OU, IHSS Group 500-4; (4) IA OU, IHSS Group 500-5; (5) IA OU, IHSS Group 600-3; (6) IHSS Group 600-5; (7) IA OU IHSS Group 800-5; (8) Group 000-5 (Present Landfill) and Group SW-2 (Original Landfill); and (9) Status of ER Documents.

3.5.2.1 Buffer Zone Operable Unit, Group 900-11 (903 Pad and Inner Lip Area)

The 903 Lip Area project involved the excavation and off-site disposal of wind-blown contaminated soil. Excavation started in the 903 Lip area on December 10, 2003 and

continues to operate. The following work activities under the ER were completed during the project:

- 22,500 cubic yards (36,500 tons) of soil have been excavated for disposal; and
- 2,155 intermodals have been filled with soil and shipped off site for disposal.

3.5.2.2 Industrial Area Operable Unit, IHSS Group 500-2 (IHSS 500-158 Radioactive Site – B551)

Building 551 was located within the IA on the northern side of Central Avenue. Building 551 was placed in service in 1953 as the Plant warehouse. The original building footprint was approximately 21,600 square feet (ft^2). An addition to the northern portion (approximately 18,000 ft^2) of the building was constructed in the mid-1960s, and was used as a sheet metal fabrication shop. An area northeast of the original B551 was used as a general warehouse storage yard prior to September 1959 until the early 1970s.

Building 551 was completely removed prior to the start of accelerated action sampling in March 2004. Sampling analyses included radionuclides, metals, and volatile organic compounds (VOCs). Only one accelerated action surface soil sampling result, for chromium, exceeded the wildlife refuge worker (WRW) action level (AL). An area of soil 4.5 feet by 5 feet by 6 inches surrounding the location was excavated, drummed, and disposed of as low level mixed waste. Four confirmation samples for metal were collected from the mid-points of the excavation walls. One confirmation analytical result was above the background mean plus two standard deviations for chromium but well below the WRW AL. The excavation was backfilled with clean soil and rough graded. The IHSS Group 500-2 area is currently being used as a source for fill for other site projects. When the need for fill from the area is finished it will be graded and reseeded.

3.5.2.3 Industrial Area Operable Unit, IHSS Group 500-4 (IHSS 500-117.2 Middle Site Chemical Storage)

The Middle Site Chemical Storage area, IHSS 500-117.2, lies east of the former location of B551. The IHSS encompasses approximately 93,700 square feet (ft^2). Currently, the IHSS is asphalt-surfaced and is used for the storage of cargo containers.

Accelerated action sampling of IHSS Group 500-4 began in January 2004. At one location accelerated action sampling detected arsenic in the subsurface (between 0.5 and 2.1 feet) that was above the WRW AL. Because the detection was localized, in an area not subject to erosion, relatively low in concentration, and below the surface no remediation was performed.

3.5.2.4 Industrial Area Operable Unit, IHSS Group 500-5 (Potential Area of Concern [PAC] 500-904, Transformer Leak 223-1/223-2)

PAC 500-904 lies southwest of B559. Transformers 223-1 and 223-2 within the PAC leaked small amounts of oil prior to 1987. Analytical data from approximately 1985 indicated that the oil in Transformer 223-1 contained more than 500 parts per million

(ppm) polychlorinated biphenyls (PCBs) and that the oil in Transformer 223-2 contained less than 50 ppm PCBs. In October and November 1985, it was reported that the dielectric fluid in Transformers 223-1 and 223-2 contained 19,800 and 296 ppm PCBs, respectively. In November 1986, a smear sample collected from the concrete underlying the drain valve of Transformer 223-1 indicated less than 50 micrograms o f PCBs per square centimeter. Reportedly, the transformers were retrofilled with non-PCB cooling oil in 1987, and Transformer 223-1 was reportedly replaced in March 1989. Sometime during the 1990s, non-PCB oil from the western transformer was released to the environment, probably due to overfilling the oil reservoir, resulting in an oil stain in the soil north of the pad. Both transformers were removed from their concrete pads prior to the accelerated action characterization.

Accelerated action samples were conducted on March 18, 2004. Analytical results indicate that all contaminant concentrations are less than the WRW ALs. Therefore, action was not required and an No Further Accelerated Action (NFAA) determination for IHSS Group 500-5 will be prepared and submitted to the agencies.

The two transformer pads and the oil-stained soil north of the western pad were removed during May 2004 as an IHSS Group 500-5 best management practice. In addition, a third pad in the area, which contained a non-PCB transformer and is not part of this or any PAC, was removed at the same time. This removal disturbed the six historical sampling locations as well as Accelerated Action Sampling Location CA43-013. All seven of these locations are considered no longer representative.

3.5.2.5 Industrial Area Operable Unit, IHSS Group 600-3 (IHSS 600-120.1 Fiberglass Area North of B664)

IHSS Group 600-3 and IHSS 600-120.1 consist of the area beneath and around B668 where waste packing boxes were coated with fiberglass. Building 668 was a wooden framed structure with deteriorating walls constructed of transite panels over a single concrete slab. The structure and slab were removed by Kaiser-Hill in January 2004. Fiberglass activities occurred in the area from 1972 to 1979. The fiberglass process may have resulted in spills of polyester resin, peroxide catalyst materials, and cleaning solvents, although no documentation of spills was found.

A PDSR report indicated the presence of fixed plutonium-239/240 on the slab along the western side of the building and the semivolatile organic compound (SVOC) hexachlorobenzene in a concrete core collected in the northwestern corner of slab.

Accelerated action soil characterization sampling results for radionuclides, metals, VOCs, and SVOCs within Group 600-3 indicated no residual concentrations or activities above WRW ALs.

3.5.2.6 Industrial Area Operable Unit IHSS Group 600-5 (PAC 600-1004 – Central Avenue Ditch Cleaning)

PAC 600-1004 is an area of potentially contaminated soil previously removed from the Central Avenue Ditch, and spread on the level area adjacent to the two large fuel oil tanks that were located at the southwestern corner of Central Avenue and Seventh Street (IHSS 152). This activity was observed by the Colorado Department of Health (now CDPHE) in September 1993, and the operation was immediately shut down due to the potential of cross-contaminating IHSSs. PAC 600-1004 is the area where the excavated soil was spread, and is designated as Central Avenue Ditch Cleaning.

Accelerated action activities were conducted between June 2003 and April 2004. The characterization of PAC 600-1004 involved 14 sampling locations. Nine of these locations targeted IHSS Group 600-5, and were sampled in April 2004. The other five locations were sampled as part of the Closeout Report for IHSS Group 600-2, PAC 400-802, Storage Shed South of Building 334. These samples were collected between June and August 2003. Based on characterization results and the results of the subsurface soil risk screen (SSRS), soil removal was not required. The Closeout Report for IHSS Group 600-5 was approved by CDPHE on June18, 2004.

3.5.2.7 Industrial Area Operable Unit IHSS Group 800-5 (Under Building Contamination (UBC) 887 – Process and Sanitary Waste Tanks and PAC 800-177 – B885 Drum Storage)

Building 887 housed process waste and sanitary waste holding tanks. In 1989, a worker discovered that the process waste tanks had overflowed onto the floor with excess water from the acid scrubbers in room 266.

PAC 800-177 consists of the B885 drum and paint storage. The B885 Drum Storage Area was first used in 1953 when B881 was first occupied. Drums contain waste oil, waste paints, waste solvents, and low-level radioactive waste. In 1972, the drain water from the sump that drains the floor of B885 was found to have a temperature of 150 degrees Fahrenheit. The cause of the elevated temperature, as well as the source and destination of the liquid, is unknown. A Summary of Events (DOE 1992, Historical Release Report) indicated an inadvertent dumping of radioactive-contaminated oil sludge into an open-top dumpster located at B885. It is not clear whether there was a release to the environment.

Accelerated action activities were conducted between March 2003 and April 2004. The characterization of IHSS Group 800-5 involved a total of 11 sampling locations. Six additional sampling locations were added later to target the original process waste lines (OPWL) in this area. Based on characterization results and the results of the SSRS, soil removal was not required. The Closeout Report for IHSS Group 800-5 was approved by CDPHE on June 21, 2004.

3.5.2.8 Group 000-5 (Present Landfill) and Group SW-2 (Original Landfill)

Group 000-5 (Present Landfill)

This project involves completion of the Interim Measure/Interim Remedial Action (IM/IRA) decision document and the design and construction of a Resource Conservation and Recovery Act compliant cover at the Present Landfill. The IM/IRA underwent formal public review during the fourth quarter of FY02 and has been revised, based upon consideration of comments and continuing RFCA Party consultation. A modified, proposed final IM/IRA was released for an additional 45-day public comment period starting on September 23, 2003. Comments on the revised IM/IRA have been received and are being addressed. The responsiveness summary and final IM/IRA are being prepared for submittal to the regulators and stakeholders in the fourth quarter of FY04. Cover construction activities are scheduled to begin in the fourth quarter of FY04.

Group SW-2 (Original Landfill)

The predecisional draft IM/IRA was available for agency and informal stakeholder review in the second quarter of FY04. Public comment draft is planned for the fourth quarter of FY04. Field activities related to the design of the proposed action began in the third quarter of FY04. Construction of the proposed action is scheduled for FY05 after the approval of the IM/IRA.

3.5.2.9 Status of ER Documents

Table 2 lists the status of ER Documents from April 1, 2004 through June 30, 2004.

Table 2. Status of ER Documents

IHSS Groups	Status	Date to Agencies	Approval Date
Closeout Reports			
500-2 IHSS 500-158 Radioactive Site Building 551	Received Approval	6/10/04	6/18/04
Data Summary Reports			
500-4 IHSS 500-117.2 Middle Site Chemical Storage	Received Approval	6/10/04	6/18/04
500-5 PAC 500-904 Transformer Leak 223-1/223-2	Received Approval	5/5/04	5/17/04
600-3 IHSS 600-120.1 Fiberglass Area North of Building 664	Received Approval	4/29/04	5/12/04
600-5 PAC 600-1004 Central Avenue Ditch Cleaning	Received Approval	6/2/04	6/18/04
800-5 UBC 887 Process and Sanitary Waste Tanks and PAC 800-177 Building 885 Drum Storage	Received Approval	6/10/04	6/21/04
NFAA Summaries			
IHSS 142.10 C-1 Pond	Received Approval	2/24/04	6/17/04
SAP Addenda			
IA-04-14 – Group 400-4	Received Approval	4/1/04	4/30/04
ER RSOP Notification			
04-13 – Group 900-12	Received Approval	4/29/04	6/17/04
04-14 – Group 500-2	Received Approval	4/07/04	4/12/04
OTHER			
Present Landfill IM/IRA	Responsiveness Summary and revised IM/IRA under development		
IHSS Group 900-11 903 Lip Area IM/IRA	Addressing public comments		
CRA Methodology and Work Plan	Responded to agency comments.		
IA/BZSAP Modification 1	Revised in accordance with regulatory agency comments. Final document sent to regulatory agencies for approval.		
ER RSOP Modification 2	Draft ER RSOP Modification 1 sent to regulatory agencies	6/24/04	

4.0 Water Management

Water management activities during the third quarter of FY04 included: (1) Watershed Improvements; (2) Surface Water Management; (3) Surface Water Monitoring; and (4) Groundwater Monitoring.

4.1 Watershed Improvements

Dam maintenance activities completed during the third quarter of FY04 included: crest and embankment grass mowing; vegetation control; and application of herbicide to all upstream dam slopes. Dam crest monument and inclinometer surveys were completed. The data will be reviewed and a report will be generated during the fourth quarter of FY04 evaluating whether any embankment movement has occurred.

Storm water pollution prevention practices (silt fences, straw bales, mats, wattles, recontouring patterns, etc.) were implemented for various RFETS demolition projects to minimize storm water runoff, erosion, and sediment transport into the drainage system. In

accordance with the Storm Water Pollution Prevention Plan (SWPPP), the annual Comprehensive Site Compliance Evaluation (CSCE) inspections of all facilities were initiated. Facilities completed during this quarter included B371/374, 750 Pad, T130 Complex, 280 Laydown Yard and facilities under Material Stewardship. All inspections will be completed by September 30, 2004. The CSCE report will be issued on October 27, 2004 and will be retained as part of the SWPPP (in accordance with the RFETS National Pollutant Discharge Elimination System Permit).

Field inspections of storm water culverts and structures are ongoing for inclusion in the CSCE. As in previous years, closure activities have resulted in some existing structures being removed, and some new culverts installed due to the addition of temporary roads and new facilities. Where appropriate, any damaged storm water culverts will be identified for repair.

4.2 Surface Water Management

During the third quarter of FY04, Kaiser-Hill completed the following pond water transfers and discharges totaling 46.20 Million Gallons (MG), a decrease of 568% compared to the third quarter of FY03 (105.97 MG).

Pond A-3 activity included three outlet-valve direct discharges to Pond A-4 totaling 17.49 MG. The first discharge of 6.90 MG occurred during the period of April 12 through 19, 2004. The second discharge of 3.13 MG occurred during the period of April 22 through 26, 2004. The third discharge of 7.46 MG occurred during the period of May 27 through June 2, 2004.

Pond A-4 activity included one outlet-valve direct discharge to North Walnut Creek totaling 11.96 MG. This discharge occurred during the period of May 17 through 27, 2004. Water-quality samples were collected and analyzed, water-quality data met all requirements and all approvals and notifications were performed prior to the discharge. The City of Broomfield opted to impound this Pond A-4 discharge within Great Western Reservoir.

Pond B-5 activity included one outlet-valve direct discharge to South Walnut Creek totaling 16.75 MG. This discharge occurred during the period of May 3 through 18, 2004. Water-quality samples were collected and analyzed, water-quality data met all requirements and all approvals and notifications were performed prior to the discharge. The City of Broomfield opted to impound this Pond B-5 discharge within Great Western Reservoir.

There were no Pond A-1, A-2, B-1, B-2, C-2, or Landfill Pond transfers or discharges during the third quarter of FY04.

Transfers and discharges from RFETS ponds during the third quarter of FY04 are summarized in Table 3.

Table 3. RFETS Pond Water Transfers and Discharges - Third Quarter FY04

Dates	Pond Activity	Total MG	Mode
4/12 to 4/19	A-3 to A-4	6.90	Outlet-valve direct discharge
4/22 to 4/26	A-3 to A-4	3.13	Outlet-valve direct discharge
5/3 to 5/18	B-5 to South Walnut Creek	16.75	Outlet-valve direct discharge
5/17 to 5/27	A-4 to North Walnut Creek	11.96	Outlet-valve direct discharge
5/27 to 6/2	A-3 to A-4	7.46	Outlet-valve direct discharge
	Total for Quarter	46.20 MG	

4.3 Surface Water Monitoring

During the third quarter of FY04, 241 composite samples were collected by the RFCA automated monitoring network and submitted for analysis. This level of sampling activity is 121% of anticipated (199 samples expected) for the current monitoring network and 88% greater than the average (128 samples) for the same period during the prior seven years of RFCA sampling (3Quarter[Q])FY03: 214 samples, 3QFY02: 92 samples, 3QFY01: 128 samples, 3QFY00: 69 samples, 3QFY99: 152 samples, 3QFY98: 151 samples, and 3QFY97: 89 samples). This increased sampling rate is due to a larger network and higher than average flows for the period.

Gaging station SW055 was removed from service on April 28, 2004 to make way for 903 Lip Area accelerated actions. This station had served as a performance monitoring location in support of the 903 Pad and Lip Area accelerated actions. Runoff from the drainage area previously monitored by SW055 will be routed to location GS51 once final grading is completed for the 903 Lip Area.

Reportable 30-day average values for plutonium (Pu) and americium (Am) were observed at Point of Evaluation (POE) GS10 for the period from February 20, 2004 through May 2, 2004 using validated data. Additional data is being validated. The end of the reportable period will be determined when Kaiser-Hill receives subsequent analytical results.

Water flowing through GS10 also passes through the lower B-series ponds (Ponds B-4 and B-5) and South Walnut Creek before leaving RFETS. RFCA Points of Compliance (POCs) GS08 (Pond B-5 outlet) and GS03 (Walnut Creek at Indiana Street) again monitor this water. GS10 analytical results and the reportable 30-day average values were compared with those for pre-discharge samples collected from Pond B-5 prior to the March and May 2004 B-5 direct discharges and from RFCA POC monitoring stations GS08 and GS03 for those discharges (March 9 – March 22, 2004 and May 3 – May 18, 2004). Monitoring results from Pond B-5 (both predischarge samples), all discharge

GS08 composite samples, and all discharge composite samples from POC GS03 met stream standards and were below reporting thresholds for the same period.

Reportable 30-day average values for Pu were observed at POE SW093 for the period from April 11, 2004 through May 11, 2004 using validated data. Reportable 30-day average values for Am were also observed for the period from April 23, 2004 through May 11, 2004 using validated data. Additional data is being validated. The end of the reportable period will be determined when Kaiser-Hill receives subsequent analytical results.

Water flowing through SW093 also passes through the lower A-series ponds (Ponds A-3 and A-4) and Walnut Creek before leaving RFETS. RFCA POCs GS11 (Pond A-4 outlet) and GS03 (Walnut Creek at Indiana Street) again monitor this water. SW093 analytical results and the reportable 30-day average values were compared with those for pre-discharge samples collected from Pond A-4 prior to the May 2004 direct discharge and from RFCA POC monitoring stations GS11 and GS03 during the May discharge (May 17 – May 27, 2004). Monitoring results from Pond A-4 (predischarge samples), composite samples from POC GS03 (the first 2 of 3), and composite samples from POC GS11 (the first 2 of 3) met stream standards and were below reporting thresholds for the same period. Additional monitoring results for the May discharge composite samples from POCs GS03 (the last 1 of 3) and GS11 (the last 1 of 3) have not been received by Kaiser-Hill as of June 30, 2004.

Kaiser-Hill and DOE, in consultation with EPA and CDPHE, are currently developing the scope of any source evaluation activities in response to these reportable values. A key indicator of the elevated levels has been a significant increase in total suspended solids. Kaiser-Hill has issued a Management Directive (Kaiser-Hill Directive NRT-011-04) enhancing the guidance for implementing comprehensive erosion control measures at RFETS.

A review of all analytical data available for the quarter as of June 30, 2004 showed that the 30-day moving average values for all other POE and POC locations were under the RFCA action levels and standards framework for all monitored analytes.

4.4 Ground Water Monitoring

Highlights from the Fourth (calendar) Quarter 2003 and First Quarter 2004 RFCA Groundwater Monitoring Reports were presented at the Quarterly Information Exchange Meeting on May 25, 2004.

Other activities completed during the third quarter of FY04 included:

1. Sampled 146 IMP wells and other groundwater monitoring wells. 411 groundwater samples were shipped to offsite laboratories for analysis. Sampling of 17 additional wells was attempted but the wells were either dry or technically dry.

2. Measured semiannual water levels at 175 monitoring wells. Measurements were attempted at an additional 26 wells but they were dry or technically dry.
3. The Well Abandonment and Replacement Program abandoned 106 wells during the third quarter of FY04 and installed 3 new or replacement wells (33604, 33904, and 91104).
4. The Site met with IMP water working group on June 14 and 22, 2004 to discuss statistical trending analysis, proposed legacy groundwater monitoring network, and D&D-required well abandonments.
5. Created and surface water and groundwater data supersets to support the Comprehensive Risk Assessment, Ground Water IM/IRA, and draft Resource Conservation and Recovery Act Facility Investigation-Remedial Investigation/Corrective Measures Study-Feasibility Study.

5.0 Approved Decision Documents

There were no decision documents approved during the third quarter of FY04 that need to be included as an update to RFCA Attachment 12 in accordance with RFCA paragraph 122.